8/986696. Feb 25199 | 500x Feb 25199 | 509, Nathan Sloane 1842 Brookside Dr. Germantown, TN 38138-254 Une Pluston avis Davey out 3/20/99 Patent Gamera: Door Miss Davenport Im enclose the Disc that records the partial N-Lermeral anno and segundo of ANOP The 16 amendad seque ce, that gre not floor B. Hab notice of Compliand Well follows.

#08/986,606

Filed 12/08/97 Nathan H. Sloane

## THE USE OF THE ACTIVATED N-TERMINAL

SIXTEEN AMINO ACID PEPTIDE OF THE ANTINEOPLASTIC PROTEIN (ANUP) AS A PHARMACOLOGICALLY ACTIVE ANTI-TUMOR AGENT

Ac Dat



Nathan H. Sloane 1842 Brookside Drive Germantown, TN 38138

Assignee:

Antitumor Research Products, Inc.

1842 Brookside Drive Germantown, TN 38138

References Cited

## U.S. Patent Documents

4,359,415 11/1982 Sloane 4,559,325 12/1985 Burzynski 5,008,372 4/1991 Wellner 5,298,604 3/1994 Sloane

U.S. Application Number 08/641,905 05/02/96 Sloane

## OTHER PUBLICATIONS

Sloane et al. Biochemical Journal (1986), 234, pp. 355-362.

Pottathil et al, Cancer Res. Therapy and Control (1990), 1, pp. 193-198.

Struve et al. Cancer Res. Therapy and Control (1990) 1: pp. 225-230

Ridge and Sloane, Cytokine (1996) 8 pp. 1-5

Sloane and Davis, Tumor Targeting (1996) 2 pp 322-326.

Manuscript received May 20, 1997



In the absence of <u>SDS</u> neither the peptide nor the protein showed any antitumor activity. Thus the detergent is probably necessary to form the correct geometrical shape for activity as described by Sloane and Davis Tumor Targeting (1996)  $\underline{2}$ , 322-326. The data utilizing  $P_{16}$  as an antitumor agent against the human breast tumor cell line (MDA 231) are as follows:

	Activity relative to ANUP
P <sub>16</sub> no SDS P <sub>16</sub> + 0.005% SDS	± no Activity 0.04

Fraction of the

 $P_{16} + 0.05\% \text{ SDS}$  0.04  $P_{16} + 0.02\% \text{ SDS}$  0.50  $P_{16} + 0.05\% \text{ SDS}$  0.50

## I Claim:

- 1. The use of the 16 L-amino acid peptide representing the partial N-terminal sequence of the antineoplastic protein (ANUP) as a pharmacologically antitumor agent which kills human tumor cells (using the human breast tumor cell line as a model).
- 2. The sequence of this peptide is: pyroglutamyl-leucinyl-lysinyl-cysteinyl-tyrosinyl-threoninyl-cysteinyl-lysinyl-glutamyl-prolinyl-methioninyl-threoninyl-serinyl-alaninyl-cysteine.
- 3. The use of the detergent sodium dodecyl sulfate to activate the 16 amino acid peptide to a form that kills human tumor cells using the human breast tumor cell line as an example.